37ᵗʰ Brazilian Symposium on Software Engineering - SBES 2023 Open Science Policies

(These open science policies were adapted and translated to Portuguese by Christina von Flach (licensed under CC0 1.0), from ICSE 2023 open policies, which, in their turn, were based on open science policies by Daniel Graziotin, licensed under CC0 1.0)

Openness in science is key to fostering progress via transparency and availability of all outputs produced at each investigative step. Transparency and availability of research outputs allow better reproducibility, replicability of quantitative studies, and recoverability of qualitative studies. Open science builds the core for excellence in evidence-based research.

As the premier Software Engineering symposium in Latin America, with proceedings published in the ACM Digital Library since 2009, **SBES 2023** adheres to open science policies (as adopted by SIGSOFT and ACM-related venues, e.g., the ICSE 2023 initiative) and actively supports setting standards for how we conduct this kind of research. To this end, we have explicitly committed to fostering openness to our research outcomes. In particular, to support the adoption of open data and open source principles, we provide this guideline to SBES 2023 authors and reviewers and introduce the role of the *Open Science Chair.*

We encourage all contributing authors to disclose the (anonymized and curated) data and software to increase the reproducibility and replicability of the studies.

Principles

Research output should be publicly and freely accessible by anyone, permanently. Artifacts related to a study (which include, but are not limited to, raw and transformed data, appendices, analysis scripts, software, virtual machines and containers, and qualitative codebooks) and the paper itself should, in principle, be made available on the Internet:

1. without any barrier (e.g., paywalls, registration forms, request mechanisms),
2. under a proper open license that specifies purposes for re-use and repurposing, properly archived and preserved,
3. provided that **no ethical, legal, technical, economic, or sensible barriers prevent the disclosure**.

According to 3, there are circumstances in which following open principles is not possible or advisable in practice.

Open Artifacts

Fostering artifacts as open data and open source should be done as follows:

- Archived on preserved digital repositories such as zenodo.org, figshare.com, www.softwareheritage.org, osf.io, or institutional repositories. GitHub, GitLab, and similar services for version control systems **do not** offer properly archived and preserved data. Personal or institutional websites, consumer cloud storage such as Dropbox, or services such as Academia.edu and Researchgate.net **do not** provide properly archived and preserved data.

- Released under a proper open data license such as the CC0 dedication or the CC-BY 4.0 license when publishing the data.
- Software can be released under an open-source license.
- Different open licenses, if mandated by institutions or regulations, are also permitted.
- We encourage authors to make artifacts available upon submission (either privately or publicly) and upon acceptance (publicly).

Supporting Statement

We ask authors to provide a supporting statement on the artifact availability (or lack thereof) in their submitted papers in a section named "Artefact Availability" after the "Conclusion" section.

Authors who make open data and/or open software available should indicate the links from which they can be found. Authors who cannot disclose data for the reasons stated in the principles should provide a short statement and articulate why. Disclosure makes explicit the conditions under which the ethic of openness is superseded by other ethical concerns, for instance, sharing some human participant data could violate confidentiality.

Please note that the success of the open science initiative depends on the willingness (and possibilities) of authors to disclose their data and that **all submissions will undergo the same review process independent of whether they disclose their analysis code or data**.

HOWTOs

- A step-by-step approach to disclosing artifacts for (doubly anonymous) peer review and making it open data upon acceptance is available online.
- A step-by-step approach to automatically archive a GitHub repository to Zenodo.org is available online.
- A step-by-step approach to automatically archive a GitHub repository to figshare.com is available online.
- A proposal for artifact evaluation by SIGSOFT is available online.
- A proposal for open science in software engineering, including explanations for structuring an open artifact, is available at https://arxiv.org/abs/1904.06499.

Open Access

We encourage SBES 2023 authors to self-archive their pre- and post-prints in open and preserved repositories. Self-archiving is legal and allowed by most publishers (granted in the copyright transfer agreement), enabling anybody in the world to reach papers barrier-free.

Upon acceptance to SBES 2023, we encourage authors to revise their paper according to their peers' comments, generate a PDF version (post-print), and submit it to their institutional repository.

Authors should avoid a Creative Commons license for their preprints in any repository, if the published papers are not open access. More information is available online.

Note: Authors are not allowed to self-archive the PDF of the published article as typeset by the publisher (a.k.a. "publisher proof," "published paper," "the digital library version").

A comprehensive FAQ for open access and self-archiving is available at
https://avandeursen.com/2016/11/06/green-open-access-faq/.

Open Science Chair

If you have questions, please email the Open Science Chair (see CFP) at any time. Contacting the Open Science Chair does not violate the doubly anonymous submissions.

Instructions for Reviewers

SBES 2023 has adopted an open science stance and introduced these guidelines for authors. The open science policies invite authors to provide all research artifacts for peer review, self-archive their pre- and post-prints, and archive artifacts as open data upon acceptance. We kindly ask you to pay attention to the following while reviewing:

1. **All open science steps are optional for authors and reviewers.** You are invited but **not** required to inspect the provided artifacts as part of your review efforts.
2. All reasons for partial disclosure of data (or lack thereof) stated in the Artefact Availability section should be trusted.
3. Submissions must undergo the same review process regardless of whether they disclose their analysis code or data. You are invited to complain in your review of any absence of data, but please **do not** let it influence your review of submissions. You are free to welcome the disclosure of data with the support of the open science chairs.
4. Open science is challenging for qualitative studies. Please welcome qualitative studies that open their artifacts even in a limited way. Furthermore, please remember that concepts such as replicability and reproducibility might apply partially or not with qualitative studies.
5. Providing research artifacts might introduce issues with doubly-anonymous reviews, we ask you **not** to actively hunt the authors' identity, especially if they self-archived a preprint of their submission.

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